

In re Patent Application of:
VARNEY ET AL.
Serial No. 10/772,961
Filing Date: **FEBRUARY 5, 2004**

In the Claims:

1. (Currently Amended) A marine outboard motor comprising:

a power unit comprising a drive output and an exhaust outlet; and

a pump jet comprising

a rotor hub and a rotor carried thereby,
said rotor hub connected to the drive output of said power unit for selective rotation for forward or reverse motion, said rotor hub having an internal passageway connected in fluid communication with the exhaust outlet, and

an exhaust bypass movable between normal and bypassed positions, said exhaust bypass comprising

an outer sleeve having a plurality of spaced apart exhaust windows therethrough, and

an inner sleeve having a plurality of spaced apart exhaust windows therethrough,

said exhaust bypass being when in the normal position when the spaced apart exhaust windows are non-overlapping for directing exhaust through the internal passageway of said rotor hub to discharge downstream of said rotor during forward motion, and being said exhaust bypass when in the bypassed position when the exhaust windows are overlapping for bypassing exhaust from the internal

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passageway to discharge downstream of said rotor during reverse motion.

2. (Original) A marine outboard motor according to Claim 1 wherein said exhaust bypass is self-set to the normal position based upon rotation of said rotor hub for forward motion, and to the bypassed position based upon rotation of said rotor hub for reverse motion.

Claim 3 (Cancelled).

4. (Currently Amended) A marine outboard motor according to ~~Claim 3~~ Claim 1 wherein said outer sleeve is stationary, and said inner sleeve rotates for placing said exhaust bypass in the normal or bypassed position.

5. (Original) A marine outboard motor according to Claim 4 wherein said outer sleeve includes at least one slot; and wherein said inner sleeve comprises at least one pin extending outwardly therefrom and into the at least one slot, said exhaust bypass being in the normal or bypassed position based upon rotation of said at least one pin in the at least one slot.

6. (Original) A marine outboard motor according to Claim 4 wherein said drive output comprises a rotor shaft extending outwardly from said power unit and through said exhaust bypass for engaging said rotor hub; said rotor hub including an outer end surface with a circular groove therein, and said inner sleeve including a circularly shaped protruding

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end that is received by the groove in said rotor hub, and rotation of said rotor hub causes said inner sleeve to rotate based upon a viscous friction therebetween.

7. (Original) A marine outboard motor according to Claim 4 wherein said drive output comprises a rotor shaft extending outwardly from said power unit and through said exhaust bypass for engaging said rotor hub; said rotor hub further comprising a lever pivotally connected in the internal passageway thereof and having a first end engaging said inner sleeve, and rotation of said rotor hub causes said inner sleeve to rotate.

8. (Original) A marine outboard motor according to Claim 7 wherein said lever has a second end, and rotation of said rotor hub above a predetermined speed causes the first end to disengage said inner sleeve.

9. (Original) A marine outboard motor according to Claim 7 wherein said lever is under compression so that the first end thereof engages said inner sleeve.

10. (Original) A marine outboard motor according to Claim 1 wherein said pump jet further comprises:

a rotor housing enclosing said rotor hub,
said rotor and said exhaust bypass; and

a stator housing connected to said rotor housing and comprising a stator hub having an internal passageway connected in fluid communication with the internal passageway of said rotor hub.

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11. (Original) A marine outboard motor according to Claim 10 further comprising a housing for carrying said power unit, said housing including a mounting plate extending above said pump jet; and wherein said stator housing further comprises a dorsal fin extending therefrom for securing said pump jet to said mounting plate.

12. (Original) A marine outboard motor according to Claim 10 further comprising a housing for carrying said power unit, said housing including a mounting plate extending above said pump jet; and wherein said rotor housing further comprises a dorsal fin extending therefrom for securing said pump jet to said mounting plate.

13. (Original) A marine outboard motor according to Claim 10 further comprising a housing for carrying said power unit, said housing including a skeg; and a clamp for securing said rotor housing to said skeg.

14. (Original) A pump jet for a marine outboard motor comprising:

a rotor hub and a rotor carried thereby, said rotor hub to be connected to a drive output of the outboard motor for selective rotation for forward or reverse motion, said rotor hub having an internal passageway to be in fluid communication with an exhaust outlet of the outboard motor; and

an exhaust bypass movable between normal and bypassed positions, said exhaust bypass comprising
an outer sleeve having a plurality of

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spaced apart exhaust windows therethrough, and
an inner sleeve having a plurality of
spaced apart exhaust windows therethrough,
said exhaust bypass being in the normal position
when the spaced apart exhaust windows are non-overlapping for
directing exhaust through the internal passageway of said
rotor hub to discharge downstream of said rotor during forward
motion, and being in the bypassed position when the exhaust
windows are overlapping for bypassing exhaust from the
internal passageway to discharge downstream of said rotor
during reverse motion.

15. (Original) A pump jet according to Claim 14
wherein said exhaust bypass is self-set to the normal position
based upon rotation of said rotor hub for forward motion, and
to the bypassed position based upon rotation of said rotor hub
for reverse motion.

16. (Original) A pump jet according to Claim 14
wherein said outer sleeve is stationary, and said inner sleeve
rotates for placing said exhaust bypass in the normal or
bypassed position.

17. (Original) A pump jet according to Claim 16
wherein said outer sleeve includes at least one slot; and
wherein said inner sleeve comprises at least one pin extending
outwardly therefrom and into the at least one slot, said
exhaust bypass being in the normal or bypassed position based
upon rotation of said at least one pin in the at least one
slot.

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18. (Original) A pump jet according to Claim 16 wherein the outboard motor comprises a rotor shaft extending outwardly therefrom and through said exhaust bypass for engaging said rotor hub; said rotor hub including an outer end surface with a circular groove therein, and said inner sleeve including a circularly shaped protruding end that is received by the groove in said rotor hub, and rotation of said rotor hub causes said inner sleeve to rotate based upon a viscous friction therebetween.

19. (Original) A pump jet according to Claim 16 wherein the outboard motor comprises a rotor shaft extending outwardly therefrom and through said exhaust bypass for engaging said rotor hub; said rotor hub further comprising a lever pivotally connected in the internal passageway thereof and having a first end engaging said inner sleeve, and rotation of said rotor hub causes said inner sleeve to rotate.

20. (Original) A pump jet according to Claim 19 wherein said lever has a second end, and rotation of said rotor hub above a predetermined speed causes the first end to disengage said inner sleeve.

21. (Original) A pump jet according to Claim 19 wherein said lever is under compression so that the first end thereof engages said inner sleeve.

22. (Original) A pump jet according to Claim 14 further comprising:

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a rotor housing surrounding said rotor hub, said rotor and said exhaust bypass; and

a stator housing connected to said rotor housing and comprising a stator hub having an internal passageway connected in fluid communication with the internal passageway of said rotor hub.

23. (Original) A pump jet according to Claim 22 wherein the outboard motor comprises a housing including a mounting plate that extends above the pump jet; and wherein said stator housing further comprises a dorsal fin extending therefrom for securing said pump jet to the mounting plate.

24. (Original) A pump jet according to Claim 22 wherein the outboard motor comprises a housing including a mounting plate that extends above the pump jet; and wherein said rotor housing further comprises a dorsal fin extending therefrom for securing said pump jet to the mounting plate.

25. (Currently Amended) A method for discharging exhaust from a pump jet for a marine outboard motor comprising a power unit including a drive output and an exhaust outlet, the pump jet comprising a rotor hub and a rotor carried thereby, the rotor hub being connected to the drive output of the power unit for selective rotation for forward or reverse motion, and the rotor hub having an internal passageway connected in fluid communication with the exhaust outlet, and an exhaust bypass movable between normal and bypassed positions, the exhaust bypass comprising an outer sleeve having a plurality of spaced apart exhaust windows therethrough and an inner sleeve having a plurality of spaced

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apart exhaust windows therethrough, the method comprising:
placing ~~an~~ the exhaust bypass in ~~a~~ the normal position so that the spaced apart exhaust windows are non-overlapping during forward motion for directing exhaust through the internal passageway of the rotor hub for discharging downstream of the ~~rotor~~ rotor during forward motion; and

placing the exhaust bypass in ~~a~~ the bypassed position so that the exhaust windows are overlapping during reverse motion for bypassing exhaust from the internal passageway for discharging downstream of the rotor during reverse motion.

26. (Currently Amended) A method according to Claim 25 wherein placing the exhaust bypass in the normal position comprises self-setting the exhaust bypass ~~is self-set to the normal position~~ based upon rotation of the rotor hub for forward motion, and wherein placing the exhaust bypass in the bypassed position comprises self-setting the exhaust bypass based upon rotation of the rotor hub for reverse motion.

Claim 27 (Cancelled).

28. (Currently Amended) A method according to ~~Claim 27~~ Claim 25 wherein the outer sleeve is stationary, and further comprising rotating the inner sleeve ~~rotates~~ for placing the exhaust bypass in the normal or bypassed position.

29. (Currently Amended) A method according to Claim

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28 wherein the outer sleeve includes at least one slot; and wherein the inner sleeve comprises at least one pin extending outwardly therefrom and into the at least one slot, and wherein placing the exhaust bypass being in the normal or bypassed position is based upon rotation of the at least one pin in the at least one slot.

30. (Currently Amended) A method according to Claim 28 wherein the power unit comprises a rotor shaft extending outwardly therefrom and through the exhaust bypass for engaging the rotor hub; the rotor hub including an outer end surface with a circular groove therein, and the inner sleeve including a circularly shaped protruding end that is received by the groove in the rotor hub, and wherein rotating ~~rotation~~ of the rotor hub causes the inner sleeve to rotate based upon a viscous friction therebetween.

31. (Currently Amended) A method according to Claim 28 wherein the drive output comprises a rotor shaft extending outwardly from the power unit and through the exhaust bypass for engaging said rotor hub; said rotor hub further comprising a lever pivotally connected in the internal passageway thereof and having a first end engaging the inner sleeve, and wherein rotating ~~rotation~~ of the rotor hub causes the inner sleeve to rotate.

32. (Currently Amended) A method according to Claim 31 wherein the lever has a second end, and wherein rotating ~~rotation~~ of the rotor hub above a predetermined speed causes the first end to disengage the inner sleeve.

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33. (New) A marine outboard motor comprising:
a power unit comprising a drive output and an
exhaust outlet;
a pump jet comprising
a rotor hub and a rotor carried thereby,
said rotor hub connected to the drive output of said
power unit for selective rotation for forward or
reverse motion, said rotor hub having an internal
passageway connected in fluid communication with the
exhaust outlet, and
an exhaust bypass movable between normal
and bypassed positions, said exhaust bypass when in
the normal position directing exhaust through the
internal passageway of said rotor hub to discharge
downstream of said rotor during forward motion, said
exhaust bypass when in the bypassed position
bypassing exhaust from the internal passageway to
discharge downstream of said rotor during reverse
motion;
a rotor housing enclosing said rotor hub, said rotor
and said exhaust bypass; and
a stator housing connected to said rotor housing and
comprising a stator hub having an internal passageway
connected in fluid communication with the internal passageway
of said rotor hub.

34. (New) A marine outboard motor according to
Claim 33 wherein said exhaust bypass is self-set to the normal
position based upon rotation of said rotor hub for forward

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motion, and to the bypassed position based upon rotation of said rotor hub for reverse motion.

35. (New) A marine outboard motor according to Claim 33 wherein said exhaust bypass comprises:

an outer sleeve having a plurality of spaced apart exhaust windows therethrough; and

an inner sleeve having a plurality of spaced apart exhaust windows therethrough;

said exhaust bypass being in the normal position when the spaced apart exhaust windows are non-overlapping, and being in the bypassed position when the exhaust windows are overlapping.

36. (New) A marine outboard motor according to Claim 35 wherein said outer sleeve is stationary, and said inner sleeve rotates for placing said exhaust bypass in the normal or bypassed position.

37. (New) A marine outboard motor according to Claim 36 wherein said outer sleeve includes at least one slot; and wherein said inner sleeve comprises at least one pin extending outwardly therefrom and into the at least one slot, said exhaust bypass being in the normal or bypassed position based upon rotation of said at least one pin in the at least one slot.

38. (New) A marine outboard motor according to Claim 36 wherein said drive output comprises a rotor shaft extending outwardly from said power unit and through said

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exhaust bypass for engaging said rotor hub; said rotor hub including an outer end surface with a circular groove therein, and said inner sleeve including a circularly shaped protruding end that is received by the groove in said rotor hub, and rotation of said rotor hub causes said inner sleeve to rotate based upon a viscous friction therebetween.

39. (New) A marine outboard motor according to Claim 36 wherein said drive output comprises a rotor shaft extending outwardly from said power unit and through said exhaust bypass for engaging said rotor hub; said rotor hub further comprising a lever pivotally connected in the internal passageway thereof and having a first end engaging said inner sleeve, and rotation of said rotor hub causes said inner sleeve to rotate.

40. (New) A marine outboard motor according to Claim 39 wherein said lever has a second end, and rotation of said rotor hub above a predetermined speed causes the first end to disengage said inner sleeve.

41. (New) A marine outboard motor according to Claim 39 wherein said lever is under compression so that the first end thereof engages said inner sleeve.

42. (New) A marine outboard motor according to Claim 33 further comprising a housing for carrying said power unit, said housing including a mounting plate extending above said pump jet; and wherein said stator housing further comprises a dorsal fin extending therefrom for securing said

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pump jet to said mounting plate.

43. (New) A marine outboard motor according to Claim 33 further comprising a housing for carrying said power unit, said housing including a mounting plate extending above said pump jet; and wherein said rotor housing further comprises a dorsal fin extending therefrom for securing said pump jet to said mounting plate.

44. (New) A marine outboard motor according to Claim 33 further comprising a housing for carrying said power unit, said housing including a skeg; and a clamp for securing said rotor housing to said skeg.